TP T 15HD A

TP - Twisted Pair Transmitter for RGBHV and Audio

FEATURES

- **Input: Female 15-pin HD connector with 3.5 mm stereo mini jack**
- **Output: One female RJ-45 connector**
- **Compatible with VGA-UXGA, component video, S-video, and composite signals**
- **Transmits signals 1,000 feet (300 meters) or more over a single CAT 5, 5e, or 6 cable**
- **Buffered local monitor output**
- **Horizontal shift control for computer video**
- **DDSP™ - Digital Display Sync Processing**
- **LED power indicator on front panel**
- **Through-desk, under-desk, or rack-mountable**
- **External universal power supply included, replacement part # 70-776-01** — Provides worldwide power compatibility.

DESCRIPTION

The Extron **TP T 15HD A** computer-video and audio transmitter accepts analog computer-video and PC audio and transmits the signals 1,000 feet (300 meters) or more over CAT 5, 5e, or 6 cable or Extron Enhanced Skew-Free™ A/V UTP cable to Extron TP Series twisted pair RGBHV and composite video receivers.

The TP T 15HD A accepts computer-video input signals on a female 15-pin HD connector and transmits the video on a shielded female RJ-45 connector. The transmitter includes a buffered local monitor output on a female 15-pin HD connector. The TP T 15 HD A receives PC audio on a 3.5 mm stereo mini jack.

SPECIFICATIONS

VIDEO

Number / Signal type	1 set of proprietary analog signals
Connectors	1 shielded RJ-45 female

VIDEO INPUT

Number / Signal type	1 analog RGBHV, RGBS, RGsB, component video, or S-video; or 1 S-video and 1 NTSC/PAL/SECAM composite video from a single source; or 3 NTSC/PAL composite video from a single source
Connectors	(1) 15-pin HD female (Mac and Sun/SGI to VGA adapters are available)
Nominal level	1 Vp-p for Y of component video and S-video, and for composite video 0.7 Vp-p for RGB for R-Y and B-Y of component video, 0.3 Vp-p for C of S-video
Minimum / Maximum levels	0.3 V to 1.45 Vp-p with no offset at unity gain
Impedance	75 ohms
Horizontal frequency	15 kHz to 130 kHz
Vertical frequency	30 Hz to 150 Hz
Return loss	<-30 dB @ 5 MHz
DC offset (max. allowable)	100 mV

VIDEO OUTPUT

REFER TO THE TP RECEIVERS FAMILY MANUAL, PART #68-547-02

AUDIO

Number / Signal type	1 set of analog proprietary signals
Connectors	1 shielded RJ-45 female
Frequency response	20 Hz to 20 kHz, ±0.05 dB
THD + Noise	0.03% @ 1 kHz, 0.3% @ 20 kHz at nominal level
S/N	>63 dB at maximum output (unweighted)
Crosstalk	<-80 dB @ 1 kHz, fully loaded
Stereo channel separation	>80 dB @ 1 kHz
CMRR	>33 dB @ 20 Hz to 20 kHz

AUDIO INPUT

Number / Signal type	1 stereo, unbalanced
Connectors	(1) 3.5 mm mini jack
Impedance	5k ohms, unbalanced, DC coupled
Nominal level	-10 dBV (316 mV)
Maximum level	+5.5 dBu, (unbalanced) at 1%THD+N
CMRR	>75 dB @ 20 Hz to 20 kHz

NOTE: 0 dBu = 0.775 Vrms, 0 dBV = 1 Vrms, 0 dBV ≈ 2 dBu.

AUDIO OUTPUT

REFER TO THE TP RECEIVERS FAMILY MANUAL, PART #68-547-02

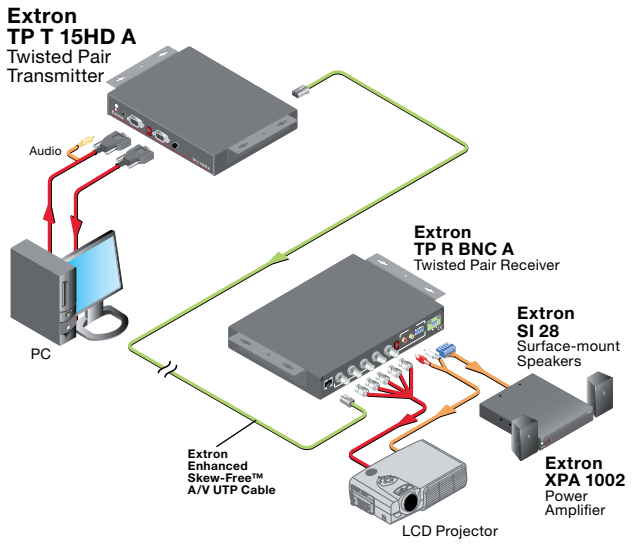
GENERAL

Power	15 VDC, 0.8 A, external or provided by the TP R receiver for up to 300' distance

NOTE: The TP R 15HD A receiver will not provide power to any twisted pair transmitter.

Rack mount	Yes, with optional 1U rack shelf, part #60-190-01 or #60-604-01, and rack shelf mounting kit #70-123-01. Furniture mountable with optional mounting brackets #70-077-01 or #70-077-02.
Enclosure type	Metal
Enclosure dimensions	1.3" H x 6.8" W x 4.5" D (<1U high, <half rack wide) (3.3 cm H x 17.3 cm W x 11.4 cm D) (Depth excludes connectors.)
Product / Shipping weight	0.8 lbs (0.4 kg) / 3 lbs (2 kg)

Note: For complete specifications, please go to www.extron.com



MODEL	VERSION DESCRIPTION	PART #
TP T 15HD A	Transmitter - 15HD	60-345-02

COMPATIBLE RECEIVERS	MODEL DESCRIPTION	PAGE	PART #
TP R BNC A	TP R - Twisted Pair Receiver for RGBHV and Audio	page 114	60-351-02
TP R BNC AV	TP R - Twisted Pair Receiver for RGBHV, Composite Video, and Audio	page 115	60-350-03
TP R 15HD A	TP R - Twisted Pair Receiver for RGBHV and Audio	page 113	60-450-01

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TP T 15HD 45

TP - Twisted Pair Transmitter for RGBHV - 45 mm Mount Version

UNIQUE FEATURES

- **Input: Female 15-pin HD connector**
- **Output: 8-pin spring force wire connector**
- **External universal power supply included, replacement part # 70-775-01**

TP T A 45

TP - Twisted Pair Transmitter for Stereo Audio - 45 mm Mount Version

UNIQUE FEATURES

- **Input: Female 3.5 mm stereo mini jack**
- **Output: Captive screw connector**
- **Converts unbalanced analog audio signal into proprietary digital audio format compatible with TP R Series receivers**

SERIES FEATURES

- **Work together to transmit signals 1,000 feet (300 meters) or more over a single CAT 5, 5e, or 6 cable**
- **Supports RGBHV, RGBS, RGsB, component video, S-video, and composite video**
- **High resolution computer-video and unbalanced audio**
- **Designed for installation into European wall boxes, floor boxes, or cable channel system**
- **LED power indicator**

DESCRIPTION

The Extron **TP T 15HD 45** and **TP T A 45** Twisted Pair Transmitters mount in 45 mm European mounting frames and work together to send high resolution video and stereo audio signals on twisted pair cable. Together, they can be used to create an economical, high performance system for transmitting VGA/RGB computer video with stereo audio up to 300 meters using CAT 5, 5e, or 6 cable or Extron Enhanced Skew-Free™ A/V UTP cable. Both models are designed to be mounted side-by-side into a 45 mm mounting frame for installation in common European wall boxes, cable channel systems, and floor boxes.

The Extron TP T A 45 is a high performance audio transmitter that converts an unbalanced analog audio signal into digital audio. This enables complete signal isolation resulting in reduced noise and improved signal quality.

The TP T A 45 includes a 3.5 mm stereo mini jack on the front for stereo audio input and a 2-pin terminal block for routing the audio signal to the TP T 15HD 45. The TP T 15HD 45 accepts a video signal on a female 15-pin HD connector. Both audio and video signals are output from the TP T 15HD 45 via an 8-pin terminal block. An external universal power supply is included.

When using data grade twisted pair cable for sending high-resolution video signals long distances, a problem called skew can cause a distortion in the image, resulting in visible color separation. Extron offers two options for solving this problem and restoring image quality. The first option is to use Extron's Skew-Free™ A/V UTP cable to make system connections. The second option is to place an SEQ 100 15HD Skew Equalizer at the receiving end of any cable run where skew is a problem.

The Extron TP T 15HD 45 and TP T A 45 are compatible with the Extron TP R 15HD A, TP R BNC A, and TP R BNC AV twisted pair receivers. They can also be used with the Extron TPX 88 and TPX 88 A twisted pair matrix switchers to create a complete twisted pair A/V routing system.

MODEL	VERSION DESCRIPTION	PART #
TP T 15HD 45	RGBHV Transmitter - 45mm	60-654-01
TP T A 45	Audio Transmitter - 45mm	70-368-01

COMPATIBLE RECEIVERS	MODEL DESCRIPTION	PAGE	PART #
TP R BNC A	TP - Twisted Pair Receiver for RGBHV and Audio	page 114	60-351-02
TP R BNC AV	TP - Twisted Pair Receiver for RGBHV, Composite Video, and Audio	page 115	60-350-03
TP R 15HD A	TP R - Twisted Pair Receiver for RGBHV and Audio	page 113	60-450-01
VTR001	VT - VGA Twisted Pair Receiver for RGBHV	page 106	60-582-01
VTR001 AAP	VT - VGA Twisted Pair Receiver for RGBHV - AAP Version	page 106	70-259-11
VTR001 MAAP	VT - VGA Twisted Pair Receiver for RGBHV - MAAP Version	page 106	70-285-11

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Extron®

TP T 45 Series

SPECIFICATIONS

VIDEO (TP T 15HD 45)

Number / Signal type ..... 1 set of proprietary analog signals
Connectors ..... (1) 8-pin spring force captive wire connector

VIDEO INPUT (TP T 15HD 45)

Number / Signal type ..... 1 analog RGBHV, RGBS, RGsB, component video, or S-video; or
1 S-video and 1 NTSC/PAL/SECAM composite video from a single source; or
3 NTSC/PAL composite video from a single source
Connectors ..... (1) 15-pin HD female (Mac and Sun/SGI to VGA adapters are available)
Nominal level ..... 1 Vp-p for Y of component video and S-video, and for composite video
0.7 Vp-p for RGB and for R-Y and B-Y of component video
0.3 Vp-p for C of S-video
Minimum / Maximum levels ... 0.3 V to 1.45 Vp-p with no offset at unity gain
Impedance ..... 75 ohms
Horizontal frequency ..... 15 kHz to 130 kHz
Vertical frequency ..... 30 Hz to 150 Hz
Return loss ..... <-30 dB @ 5 MHz
DC offset (max. allowable) ..... 100 mV

VIDEO OUTPUT

REFER TO THE TP RECEIVERS FAMILY MANUAL, PART #68-547-02

AUDIO (TP T A 45)

Number / Signal type ..... 1 set of analog proprietary signals
Connectors ..... (1) 2-pin direct insertion captive screw connector
Frequency response ..... 20 Hz to 20 kHz, ±0.05 dB
THD + Noise ..... 0.03% @ 1 kHz, 0.3% @ 20 kHz at nominal level
S/N ..... >63 dB at maximum output (unweighted)
Crosstalk ..... <-80 dB @ 1 kHz, fully loaded
Stereo channel separation .... >80 dB @ 1 kHz
CMRR ..... >33 dB @ 20 Hz to 20 kHz

AUDIO INPUT (TP T A 45)

Number / Signal type ..... 1 stereo, unbalanced
Connectors ..... (1) 3.5 mm mini jack
Impedance ..... >10k ohms, unbalanced, DC coupled
Nominal level ..... -10 dBV (316 mV)
Maximum level ..... +5.5 dBu, (unbalanced) at 1%THD+N
CMRR ..... >75 dB @ 20 Hz to 20 kHz

NOTE: 0 dBu = 0.775 Vrms, 0 dBV = 1 Vrms, 0 dBV ≈ 2 dBu.

AUDIO OUTPUT

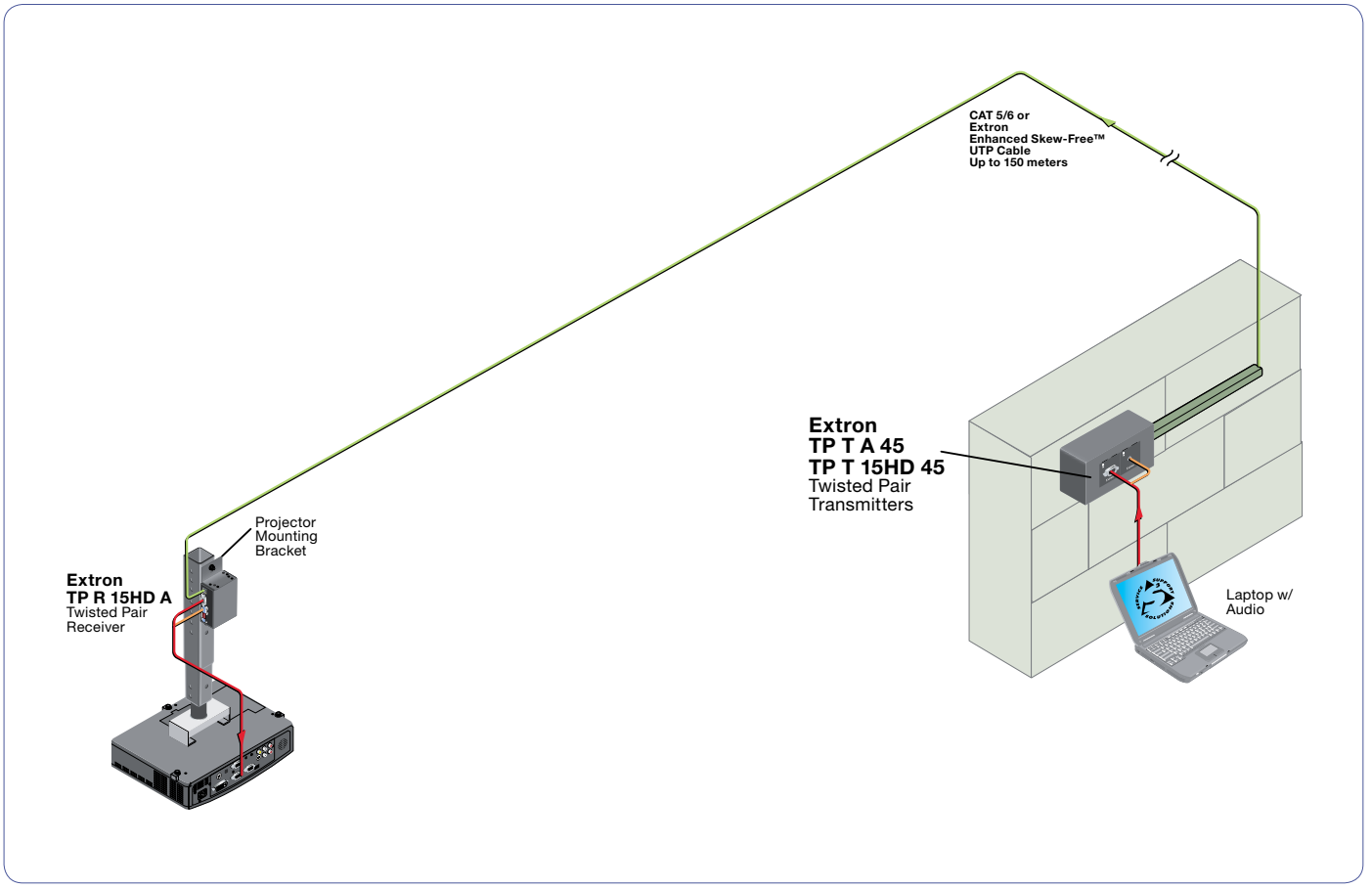
REFER TO THE TP RECEIVERS FAMILY MANUAL, PART #68-547-02

GENERAL

Power
TP T 15HD 45 ..... 12 VDC, 1.0 A, external
TP T A 45 ..... Shared with the TP T 15HD 45 transmitter
Temperature / Humidity ..... Storage: -40 to +158 °F (-40 to +70 °C) / 10% to 90%, noncondensing
Operating: +32 to +122 °F (0 to +50 °C) / 10% to 90%, noncondensing
Rack mount ..... No, but mountable in a 45 mm x 45 mm opening in common European wall boxes, floor boxes, or cable channel systems
Enclosure type ..... Metal
Enclosure dimensions
Faceplate ..... 1.8" H x 1.8" W x 0.8" D (45 mm H x 45 mm W x 20 mm D)
Device ..... 1.1" H x 1.6" W x 1.2" D (29 mm H x 41 mm W x 30 mm D)
(Depth excludes connectors.)
Product weight ..... 0.3 lbs (0.1 kg)
Shipping weight ..... 3 lbs (2 kg)
Vibration ..... ISTA 1A in carton (International Safe Transit Association)
Compliances ..... CE, FCC Class A, VCCI, AS/NZS, ICES
MTBF ..... 30,000 hours
Warranty ..... 3 years parts and labor

NOTE: All nominal levels are at ±10%. Specifications are subject to change without notice.

Note: For complete specifications, please go to www.extron.com



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